

REMARKS

Claim 1 has been amended to include the features of claim 10. Claim 10 has been cancelled without disclaimer of the subject matter contained therein. Upon entry of this amendment, claims 1-5, 9, 11-14, 17-27, 29-33, 35-37, and 41-59 remain pending.

In the Office Action dated March 10, 2006, claims 1-4, 20-22, 24, and 54-57 were rejected under 35 U.S.C. §102(e) as being anticipated by Melnychuk et al. (U.S. Patent Application Publication No. 2005/0230645). Applicants respectfully traverse this rejection.

Independent claim 1 recites a lithographic apparatus that includes, *inter alia*, “a debris-mitigation system that mitigates debris particles which are formed during use of at least a part of the lithographic apparatus, wherein the debris-mitigation system is arranged to apply a magnetic field so that at least charged debris particles are mitigated, wherein the debris-mitigation system is further arranged to switch the magnetic field alternately on and off, and wherein the debris mitigation system is further arranged to induce, in use, within a group of the debris particles, a current such that at least charged debris particles of that group deflect under influence of a force which has a direction perpendicular to a component of the magnetic field and perpendicular to a component of the electric current induced.” Melnychuk et al. does not disclose or suggest all of the features of claim 1.

Melnychuk et al. teaches an extreme ultraviolet light source that includes a debris shield. *See* Melnychuk et al. at [0167] – [0172]. Melnychuk et al. also teaches that a technique that may be used to increase the effectiveness of the debris shields includes applying a magnetic field in the region of the debris shield and the region between the pinch and the shield. *See* Melnychuk et al. at [0174]. Melnychuk et al. does not disclose or suggest a debris-mitigation system that is arranged “to induce, in use, within a group of debris particles, a current such that at least charged debris particles of that group deflect under influence of a force which has a direction perpendicular to a component of the magnetic field and perpendicular to a component of the electric current induced,” as recited by claim 1.

Moreover, in the Office Action, the Examiner indicated that claim 10 would be allowable if rewritten in independent form. Because claim 1 has been amended to include the features of claim 10, and because Melnychuk et al. does not disclose or suggest all of the features of claim 1, Applicants respectfully submit that claim 1 and the claims that depend from claim 1 are patentable over Melnychuk et al., and respectfully request that the rejection to claims 1-4 be withdrawn.

Independent claim 20 recites a source for producing EUV radiation that includes, *inter alia*, a debris-mitigation system that is arranged “to induce, in use, within a group of the debris particles an electric current such that at least charged debris particles of that group deflect under influence of a force which has a direction perpendicular to a component of the magnetic field and perpendicular to a component of the electric current induced.” Melnychuk et al. does not disclose or suggest all of the features of claim 20.

Melnychuk et al. is discussed above. Melnychuk et al. does not teach a debris-mitigation system that is arranged to induce an electric current within a group of debris particles such that at least charged debris particles of that group deflect under influence of a force which has a direction perpendicular to a component of the magnetic field and perpendicular to a component of the electric current induced, as recited by claim 20.

Accordingly, Applicants respectfully submit that claim 20 and the claims that depend from claim 20 are patentable over Melnychuk et al., and respectfully request that the rejection to claims 20-22, and 24 be withdrawn.

Independent claim 54 recites a lithographic apparatus that includes, *inter alia*, “a debris-mitigation system that mitigates debris particles which are formed during use of at least a part of the lithographic apparatus, wherein the debris-mitigation system is arranged to apply a magnetic field so that at least charged debris particles are mitigated, wherein the debris mitigation system is further arranged to induce, in use, within a group of the debris particles an electric current such that at least charged debris particles of that group deflect under influence of a force which has a direction perpendicular to a component of the magnetic field and perpendicular to a component of the electric current induced.” Melnychuk et al. does not disclose or suggest all of the features of claim 54.

Melnychuk et al. is discussed above. Because Melnychuk et al. does not disclose or suggest a lithographic apparatus that includes a debris-mitigation system that is arranged “to induce, in use, within a group of the debris particles an electric current such that at least charged debris particles of that group deflect under influence of a force which has a direction perpendicular to a component of the magnetic field and perpendicular to a component of the electric current induced,” as recited in claim 54, Applicants respectfully submit that claim 54 and the claims that depend from claim 54 are patentable over Melnychuk et al.

Accordingly, Applicants respectfully request that the rejection to claims 54-57 be withdrawn.

In the Office Action, claims 5, 23, and 58 were rejected under 35 U.S.C. §103(a) as being unpatentable over Melnychuk et al. Applicants respectfully traverse this rejection.

Dependent claim 5 depends from independent claim 1, discussed above. Dependent claim 23 depends from independent claim 20, discussed above. Dependent claim 58 depends from independent claim 54, discussed above. As discussed above, claims 1, 20, and 54 are patentable over Melnychuk et al., because Melnychuk et al. does not disclose or suggest all of the features of claims 1, 20, and 54. As such, Melnychuk et al. does not disclose or suggest all of the features of dependent claims 5, 23, and 58, which include all of the features of claims 1, 20, and 54, respectively.

Accordingly, Applicants respectfully submit that claims 5, 23, and 58 are patentable over Melnychuk et al., and respectfully request that the rejection to claims 5, 23, and 58 be withdrawn.

In the Office Action, claims 9, 10, 24-27, and 59 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

As discussed above, claim 1 has been amended to include all of the features of claim 10. Claim 9 depends from claim 1, which, as discussed above, is patentable. Claims 24-27 depend from claim 20, which, as discussed above, is patentable. Claim 59 depends from claim 54, which, as discussed above, is patentable.

Accordingly, Applicants respectfully submit that claims 9, 24-27, and 59 are also patentable and respectfully request that the objection to claims 9, 24-27, and 59 be withdrawn.

Applicants acknowledge with appreciation that claims 11-14, 17-19, 29-33, 35-37, and 41-53 are allowed. However, in view of the foregoing, Applicants respectfully submit that all of the pending claims are allowable.

All rejections and objections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited. If any point remains at issue which the Examiner feels may best be resolved through a personal or telephone interview, please contact the undersigned at the telephone number below.

BANINE ET AL. -- 10/748,851  
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Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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